

05-90  
0311

#2



ENTERED OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/10/076,622DATE: 03/04/2002 P.5  
TIME: 16:04:37Input Set : A:\470c11.app  
Output Set: N:\CRF3\03042002\J076622.raw

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4 <110> APPLICANT: Houghton, Raymond L.
5     Sleath, Paul R.
6     Persing, David H.
9 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY
10    AND DIAGNOSIS OF BREAST CANCER
12 <130> FILE REFERENCE: 210121.470C11
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/076,622
15 <141> CURRENT FILING DATE: 2002-02-13
17 <160> NUMBER OF SEQ ID NOS: 627
19 <170> SOFTWARE: FastSEQ for Windows Version 4.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 281
24 <212> TYPE: DNA
25 <213> ORGANISM: Homo sapien
27 <400> SEQUENCE: 1
28 caatgacagt caatctctat cgacagcctg cttcatatatt agctattggt cgtattgcct      60
29 tctgtcctag gaacagtcac atctcaagtt caaatgccac aacctgagaa gcggtgggct      120
30 aagataggtc ctactgcaaa ccacccctcc atatttccgt acgcaattac aattcagttt      180
31 ctgtgacatc tctttacacc actggaggaa aaatgagata ttctctgatt tattctacta      240
32 taacactcta catagagcta tgggtgagtgc taaccacatc g                      281
34 <210> SEQ ID NO: 2
35 <211> LENGTH: 300
36 <212> TYPE: DNA
37 <213> ORGANISM: Homo sapien
39 <400> SEQUENCE: 2
40 gaggtcctgg gctaacctaa tgggtttatta ttggtggaga gaaagatctg gaaatacttg      60
41 aggttattac atactagatt agcttctaatt gtgaaccatt tttcttttaa cagtataaaa      120
42 ttattatttc cgaagttaac tgttcccttg gtogtgatac acactcgatt aacaaacata      180
43 ctgttgatatt ttttccagtt ttggttggtc atgccaccac agtcatcccc agggctctata      240
44 catactatgt ctcaactgta ttatttgcca tttttggcat tagaatgctt cggaaggct      300
46 <210> SEQ ID NO: 3
47 <211> LENGTH: 302
48 <212> TYPE: DNA
49 <213> ORGANISM: Homo sapien
51 <400> SEQUENCE: 3
52 ggccgaggta attggttaag tctaaagaga ttattattcc ttgatgtttg ctttgatttg      60
53 gctacaaatg tgcagaggta atacatatgt gatgtcgatg tctctgtctt ttttttgc      120
54 tttaaaaaat aattggcagc aactgtattt gaataaaatg atttcttagt atgattgtac      180
55 agtaatgaat gaaagtggaa catgtttctt tttgaaaggg agagaattga ccattttattg      240
56 ttgtgatgtt taagtataaa cttatcgagc acttttagta gtgataactg tttttaaact      300
57 tg                                          302
59 <210> SEQ ID NO: 4
60 <211> LENGTH: 293

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## RAW SEQUENCE LISTING

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Input Set : A:\470c11.app

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61 <212> TYPE: DNA
62 <213> ORGANISM: Homo sapien
64 <400> SEQUENCE: 4
65  tgtaccaatc ctttggcaca agaatatgta agaactatag ttgtttttat tggtttttgt      60
66  tcttgagatt gttttcattc tgtttttgac tgtatctctt taggaggctg aggatggcat      120
67  tattgcttat gatgactgtg ggggtgaaact gactattgct tttcaagcca aggatgtgga      180
68  aggatctact tctcctcaaa tacgagataa ggcaagataa ttctgctcat tcgagagagg      240
69  gttaagagtt gtcattctta tcataaatcc tgcaggatgg gttcttcaaa ttt          293
71 <210> SEQ ID NO: 5
72 <211> LENGTH: 275
73 <212> TYPE: DNA
74 <213> ORGANISM: Homo sapien
76 <400> SEQUENCE: 5
77  cgaggtttgg aatcagactt ctgtgtccag taaaaaactc ctgcactgaa gtcattgtga      60
78  cttgagtagt tacagactga ttccagtga cttgatctaa tttcttttga tctaataaat      120
79  gtgtctgctt acctgtctc cttttaattg ataagctcca agtagttgct aattttttga      180
80  caactttaaa tgagtttcat tcacttcttt tacttaatgt ttttaagtata gtaccaataa      240
81  tttcattaac ctgttctcaa gtggttttagc tacca          275
83 <210> SEQ ID NO: 6
84 <211> LENGTH: 301
85 <212> TYPE: DNA
86 <213> ORGANISM: Homo sapien
88 <400> SEQUENCE: 6
89  gaggtctggt ttcttgaggta tgcctggact gttgccaggt gtaagatctg tgcaagccat      60
90  attggatgga agtttacggc caccaaaaaa gacatgtcac ctcaaaaatt ttggggctta      120
91  acgcgatctg ctctgttgcc cacgatccca gacactgaag atgaaataag tccagacaaa      180
92  gtaatacttt gcttgtaaac agatgtgata gagataaagt tatctaaca attggttata      240
93  ttctaagatc tgctttggaa attattgcct ctgatacata cctaagtaaa cataacatta      300
94  a          301
96 <210> SEQ ID NO: 7
97 <211> LENGTH: 301
98 <212> TYPE: DNA
99 <213> ORGANISM: Homo sapien
101 <400> SEQUENCE: 7
102  gtccagtttg tacacagtga ttcccttatgc acgccgaaag ggtttccgta aaaatgacat      60
103  tatatacaaa tctgtacacc catccaccag agcgattctc cagctcccag agggagttat      120
104  caacttaaaag caggatacct gaggtttcat gtcttttagt gccttatcat aatcccaaatt      180
105  atacatttca ggggttggtt ttgtttttta agacactttc ctggaatatg tgcactatgg      240
106  ttaaaaattaa aaacaaaagt aataaaataa aatgatcgct ggaaggactg acctccccac      300
107  c          301
109 <210> SEQ ID NO: 8
110 <211> LENGTH: 301
111 <212> TYPE: DNA
112 <213> ORGANISM: Homo sapien
114 <400> SEQUENCE: 8
115  ctgtcctcat ctctgcaaag ttcagcttcc ttccccaggt ctctgtgcac tctgtcttgg      60
116  atgctctggg gagctcatgg gtggaggagt ctccaccaga gggaggctca ggggactgg      120
117  tgggccaggg atgaatattt gagggataaa aattgtgtaa gagccaaaga attggtagta      180
118  gggggagAAC agagaggagc tgggctatgg gaaatgattt gaataatgga gctgggaata      240

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119  tggctggata tctggtacta aaaaagggtc tttaagaacc tacttcctaa tctcttcccc      300
120  a                                          301
122  <210> SEQ ID NO: 9
123  <211> LENGTH: 301
124  <212> TYPE: DNA
125  <213> ORGANISM: Homo sapien
127  <400> SEQUENCE: 9
128  gaggtctgcc taagtagagg acaaagactt cctcctttca aaggagaact gagcccagga      60
129  ttggttaagt taaggcactt aaccttgacc agctctgtag gtctggagca ttctgggtccc      120
130  tggccgcttt caccaccagg cccttctcac ttatccacct cacatactgc cccagcattc      180
131  ctttggcatt gcgagctgtg acttgacaca ttttaatgac aagattgaag tagctacctt      240
132  gcaggataga ttttctgggg tataggggac aaaccaacag tgccatcagg tgtcttaaca      300
133  c                                          301
135  <210> SEQ ID NO: 10
136  <211> LENGTH: 301
137  <212> TYPE: DNA
138  <213> ORGANISM: Homo sapien
140  <400> SEQUENCE: 10
141  ggcaggtcca acagttcttc cagttctggt cgagctttga atcgctccctt gaagtcttct      60
142  tcagtgtgct ccttcactga cagtctgact ccttcaggaa gactgctttg gattatttcc      120
143  aagaaaattt ctgcaaactg agcactcaaa ccgctgatct gaaccactcg ctcatgggtg      180
144  gtaagcactg agtccaggag cattttgctg ccttggctct gcaactgcaa cacttctatg      240
145  gttttggttg gcattgcata actttcctcg actttaatgg agagagattg cagaggttgt      300
146  g                                          301
148  <210> SEQ ID NO: 11
149  <211> LENGTH: 301
150  <212> TYPE: DNA
151  <213> ORGANISM: Homo sapien
153  <400> SEQUENCE: 11
154  aggtctgtga ctttcaccca ggaccagga cgcagccctc cgtgggcact gccgggcct      60
155  tgtctgcaca ctggagggtc tccattacag aggccagcg cacatcgctg gccccacaaa      120
156  cgttcagggg tacagccatg gcagctcctt cctctgccgt gagaaaagtg cttggagtag      180
157  ggtttgccac acacgtgact ggacagtgtc caattcaaat ctttcagggc agagtccgag      240
158  cagcgcttgg tgacagcctg tcctctcctg ctctccaaag gccctgctcc ctgtcctctc      300
159  t                                          301
161  <210> SEQ ID NO: 12
162  <211> LENGTH: 301
163  <212> TYPE: DNA
164  <213> ORGANISM: Homo sapien
166  <400> SEQUENCE: 12
167  gaggtctggg attacaggca cgtgccacca cacctagcta atttttgagc atggggctca      60
168  aaggaactgc tctctggggc atgtcagatt tcggatttgg ggctgcacac tgatactctc      120
169  taagtgtgtg aggaacttca tccactgaa attccttttg catttggggg tttgtttttc      180
170  tttttttcct tcttcactct cctccttttt taaaagtcaa cgagagcctt cgctgactcc      240
171  accgaagaag tgcaccactg ggagccaccc cagtgccagg cgcccgtcca gggacacaca      300
172  c                                          301
174  <210> SEQ ID NO: 13
175  <211> LENGTH: 256
176  <212> TYPE: DNA

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Input Set : A:\470c11.app

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177 <213> ORGANISM: Homo sapien
179 <400> SEQUENCE: 13
180 ttttttggca taaaaaacac aatgatttaa tttctaaagc acttatatta ttatggcatg      60
181 gtttgggaaa caggttatta tattccacat aggtaattat gcagtgttcc tcatggaaaa      120
182 aatgcttagg tattggcctt ttctctggaa accatatattt tcctttttta ataatcaact      180
183 aaaatgtata tgtaaaaaag cctcatcttt tgattttcaa tatacaaaat gctttcttta      240
184 aaagaacaag attcaa                                     256
186 <210> SEQ ID NO: 14
187 <211> LENGTH: 301
188 <212> TYPE: DNA
189 <213> ORGANISM: Homo sapien
191 <400> SEQUENCE: 14
192 ggtccttgat agaggaagag gaatatccaa ggcaaagcca ccaccacgtc caacctctct      60
193 atcctctacc ttctctgtcc ccagaggatg gagatagacc cctggcctg gttcctgcac      120
194 tgtgctaggc ccacagtggc cacttccacc ttaatggaga ataggcccca tggagtggag      180
195 gtccctctct catggcctgc aacccaatga ctatgggggt gacacaagtg acctctgccc      240
196 tgtgatggct caacaccatc acacgcaact gtccagacaa gccccctcaa cgggctgctg      300
197 t                                     301
199 <210> SEQ ID NO: 15
200 <211> LENGTH: 259
201 <212> TYPE: DNA
202 <213> ORGANISM: Homo sapien
204 <400> SEQUENCE: 15
205 gtcttgaaag tatttattgt ttaataattc tttctcccct cagccccatc cggccaactct      60
206 ctctttctgc ttttctgac atcctaaagg ctgaatacat cctcctctctg tgtggaggac      120
207 acgaagcaat actaaaatca atacactcga tcaggctcttc atcagatacc acgtcactgt      180
208 gggtagagtg ctaattttca acaaatgtgg tgttcttagg gccccacaag gtagtccttt      240
209 ctcaaggctg ctgggccac                                     259
211 <210> SEQ ID NO: 16
212 <211> LENGTH: 301
213 <212> TYPE: DNA
214 <213> ORGANISM: Homo sapien
216 <400> SEQUENCE: 16
217 cgaggttggt cacattttca aataaataat actccccgta agtaataact gcaaccaatc      60
218 agtgttattc agtgctatgc ctcttctgta tgggtagtta ttaattattt tcagagcttt      120
219 ctggaaatac tgtcctaact ggctatgttt aggatctttg ttatctctga agacaaagaa      180
220 agaactagga ctcttaattt tgggggtgctt cttgactctt agttgggaaa ctgaaaatat      240
221 ttccaacctt ttaccacacgt caatggcata ttctgggaat caccaccacc accaccacta      300
222 c                                     301
224 <210> SEQ ID NO: 17
225 <211> LENGTH: 301
226 <212> TYPE: DNA
227 <213> ORGANISM: Homo sapien
229 <400> SEQUENCE: 17
230 gcccgggcag gtctggggcc tagggtggct ctttgcaaag ctgaggggca agctaaggaa      60
231 gccaggcagg tcagggggcc ttctggcctt ctcaagcctc cacctgagtt ctctgcaatg      120
232 ccagtctccc tggatgatt ggggacatta tcagagaaac atctaatagc gcacatctgg      180
233 gacccacac tctgttccag ttgcatccat cctcccaccc caaattcaac tcctgacca      240
234 atacaaaaga cttttttaac caggatttct tcttgaggga aagctgactt ggaaacacgg      300

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Input Set : A:\470c11.app

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235 g 301
237 <210> SEQ ID NO: 18
238 <211> LENGTH: 301
239 <212> TYPE: DNA
240 <213> ORGANISM: Homo sapien
242 <400> SEQUENCE: 18
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244 tctctggggc atgtcagatt tcggatttgg ggctgcacac tgatactctc taagtgggtg 120
245 aggaacttca tcccactgaa attccttttg catttggggg tttgtttttc tttttttcct 180
246 tcttcacctc cctccttttt taaaagtcaa cgagagcctt cgctgactcc accgaagaag 240
247 tgcaccactg gggaccaccc agtgccaggc gcccgctccag ggacacacac agtcttcact 300
248 g 301
250 <210> SEQ ID NO: 19
251 <211> LENGTH: 301
252 <212> TYPE: DNA
253 <213> ORGANISM: Homo sapien
255 <400> SEQUENCE: 19
256 agaatctctg cactgtcatc aggtacaaca aaagatcaaa cccctgtccc gatgttaact 60
257 ttttaactta aaagaatgcc agaaaaccca gatcaacact ttccagctac gagccgtcca 120
258 caaaggccac ccaaaggcca gtcagactcg tgcagatctt attttttaat agtagtaacc 180
259 acaatacaca gctcttttaa gctgttcata ttcttccccc attaaacacc tgccccgggc 240
260 ggccaagggc gaattctgca gatattccatc aactggcgcg ccgctcgagc atgcatctag 300
261 a 301
263 <210> SEQ ID NO: 20
264 <211> LENGTH: 290
265 <212> TYPE: DNA
266 <213> ORGANISM: Homo sapien
268 <400> SEQUENCE: 20
269 aggttttttt tttttttttt tttttttttt tttttccctt tcaattcatt taatttcaac 60
270 aatctgtcaa aaaacagcca ataaacaaat actgaattac attctgctgg gttttttaaa 120
271 ggctctaaac tataaaaaca tcttgtgtct cccaccctga ccaccctgct acttttccat 180
272 ataccacagg ccaccataaa acacaaagcc agggggtgaa gctgacatgg tctatttgga 240
273 gccagtaaac aggagggcga taagtccctg taagcactta tggacaatat 290
275 <210> SEQ ID NO: 21
276 <211> LENGTH: 301
277 <212> TYPE: DNA
278 <213> ORGANISM: Homo sapien
280 <400> SEQUENCE: 21
281 agaaaaggtaa ctgccagcca ggcttgcatt gtttagccag aaattgctgc ttggttctag 60
282 actcttttaa aaaaaaaaaa acccagggtt tgtcatcatt ttcagaggca gagtgccaaa 120
283 tatcacccaa agctcttgtg tttttttttt acccccttat tttattttta tttattaatt 180
284 ttttgtgcaa acatcaaatt tcaactggtg tcacagaagg cttttttgac tagccttaaa 240
285 ttcctgagtc aaaagattaa tcagattttc aggcagtgtt taatcagggt ctttgcctg 300
286 t 301
288 <210> SEQ ID NO: 22
289 <211> LENGTH: 301
290 <212> TYPE: DNA
291 <213> ORGANISM: Homo sapien
293 <400> SEQUENCE: 22

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→ Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/076,622

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Input Set : A:\470c11.app

Output Set: N:\CRF3\03042002\J076622.raw

L:14 M:270 C: Current Application Number differs, Wrong Format

L:883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:64  
L:978 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69  
L:979 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69  
L:980 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69  
L:981 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69  
L:983 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69  
L:984 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:69  
L:1057 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73  
L:1178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80  
L:1179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80  
L:1180 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:80  
L:1257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84  
L:1271 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85  
L:1274 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85  
L:1327 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88  
L:1330 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88  
L:1331 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88  
L:1352 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89  
L:1367 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90  
L:1369 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90  
L:1371 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:90  
L:1404 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92  
L:1405 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92  
L:1423 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93  
L:1424 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93  
L:1460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95  
L:1490 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:97  
L:1491 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:97  
L:1512 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:98  
L:1533 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99  
L:1534 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:99  
L:1625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105  
L:1630 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:105  
L:1708 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110  
L:1710 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:110  
L:1725 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1726 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1727 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1728 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1729 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1730 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1731 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:111  
L:1750 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112  
L:1798 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115  
L:1878 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:120  
L:1879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:120  
L:1920 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123

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L:1924 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123

L:1926 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123

L:1954 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125